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ABSTRACT

To improve vocational educational programs in agriculture, occupational information on a common core of basic skills within the occupational area of the feed salesman is presented in the revised task inventory survey. The purpose of the occupational survey was to identify a common core of basic skills which are performed and are essential for success in the occupation. Objectives were accomplished by constructing an initial task inventory to identify duty areas and task statements for the occupation. The initial task inventory was reviewed by consultants in the field, and 103 tasks were identified. A random sample of 75 retail feed businesses based on the 1975 directory of the Ohio Grain, Feed, and Fertilizer Association, Inc. was obtained. Data were collected utilizing employer and employee questionnaires. Forty-five questionnaires were returned of which 30 were usable. A compilation of basic sample background information is presented on size of feed business, total work experience, employment at current job, and preparation as a feed salesman. A compilation of duty areas of work performed and work essential for the occupation is given. Percentage performance by incumbent workers and the average level of importance of specific task statements are presented in tabular form. (Author/FC)

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DETERMINATION OF A COMMON CORE OF BASIC SKILLS IN AGRIBUSINESS AND NATURAL RESOURCES

An Emperical Determination Of Tasks Essential To Successful Performance As A Feed Salesman

DEPARTMENT OF AGRICULTURAL EDUCATION
THE OHIO STATE UNIVERSITY
COLUMBUS, OHIO 43210

CE005642

AN EMPERICAL DETERMINATION OF TASKS ESSENTIAL TO SUCCESSFUL PERFORMANCE AS A FEED SALESMAN

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FOREWORD

The Department of Agricultural Education at The Ohio State University is involved in a major programmatic effort to improve the curricula in educational programs in agriculture. One product in this effort is this report of the feed salesman task inventory survey. The data reported were collected as part of a more comprehensive thrust designed to develop a common core of basic skills in agribusiness and natural resources.

It is hoped that the revised task inventory contained in this report will be useful to curriculum developers working for improved occupational relevance in schools. Twenty-seven additional inventories in other occupational areas are also reported from this project.

The profession owes its thanks to Daniel R. Miller, graduate research associate, for his work in preparing this report. Special appreciation is also expressed to George G. Greenleaf, Executive Vice-President, Ohio Grain, Feed, and Fertilizer Association, Inc., for his input and help in securing the cooperation of those employed in this occupational area.

J. David McCracken
Project Director

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INTRODUCTION

Occupational information is needed to develop and revise vocational and technical education curricula. Teachers and curriculum developers generally determine which skills might be taught in a program based upon teacher expertise, advisory committee input, informal and formal community surveys, and/or task inventories.

The Agricultural Education Department at The Ohio State University has utilized and revised a system for obtaining and using occupational information as an effective aid in planning, improving, and updating occupational education curricula. This report presents the results of a task analysis survey of the occupation, feed salesman. The information contained herein may be used by curriculum development specialists, teachers, local and state administrators, and others involved in planning and conducting vocational and technical programs in agriculture.

Purpose and Objectives

The major purpose of the occupational survey was to identify the skills which are performed and essential for success as a feed salesman. The specific objectives of this survey were as follows:

1. Develop and validate an initial task inventory for the feed salesman.
2. Identify the specific tasks performed by the feed salesman.
3. Determine the relative importance of the specific tasks to successful employment as a feed salesman.

Definition of the Occupational Area

The feed salesman works in retail feed mills or elevators which deal directly with the public. The specific duties performed by the feed salesman will vary with the size and type of business. The feed salesman usually is involved with over-the-counter sales to customers and may make contacts with farmers on their farms. In general, the feed salesman assists in keeping feed sales records, interprets feeding regulations for customers, sells feed to customers, assists farmers with livestock health problems, and assists farmers in formulating feeds. In some firms, the feed salesman may be called a feed sales counterman or feed mill manager.

METHODOLOGY

Objectives were accomplished by constructing an initial task inventory, validating the initial inventory, selecting a sample of workers, collecting data, and analyzing data.

Initial Task Inventory

Duty areas and task statements for the feed salesman were identified by searching existing task lists, job descriptions, curriculum guides, and reference publications. Additionally, contacts with several industry personnel aided in clarifying the specific responsibilities of the feed salesman. All the tasks that the project staff thought to be performed were assembled into one composite list.

The initial tasks were grouped into functional areas called "Duties".

After the task statements were grouped under the proper duty areas, each task statement was reviewed for brevity, clarity, and consistency. In all, 93 task statements were included in the initial task inventory.

Initial Inventory Validation

After the initial task inventory was constructed, it was reviewed by ten feed salesmen. The feed salesmen were asked to respond to the initial task list inventory by performing the following activities:

1. Indicate whether any of the tasks listed were not appropriate.

2. Add any additional tasks they believed were performed by the feed salesman.

3. Make changes in the wording of tasks to help add clarity to the statements.

The comments from the ten feed salesmen were pooled and revisions were made as needed. One duty area was added as a result of the review process.

As a result of the initial task inventory review process, 103 tasks were identified.

Worker Sample Selection

Since the specific duties and tasks performed by the feed salesman are related to the size and type of business where employed, an attempt was made to survey feed salesmen employed in various sizes and types of feed businesses. It was not possible to secure a list of the specific names and addresses of all incumbent workers in the state. Therefore, a sample of 75 retail feed businesses was obtained from the 1975 directory of the Ohio Grain, Feed, and Fertilizer Association, Inc. using a stratified random sampling approach. The strata used were type of business and geographical location.

Data Collection

A packet of materials was sent to the owner or manager of the randomly-selected feed businesses. The packet of materials

included:

1. A cover letter from the Ohio Feed, Grain, and Fertilizer Association, Inc.

2. An employer questionnaire printed on blue.

3. An employee questionnaire printed on yellow.

4. A stamped and self-addressed return envelope.

The manager or owner was [illegible]ed to complete the employer questionnaire and to ha[illegible]onsible feed salesman complete the employee questionna[illegible]e manager or owner was instructed to collect the employee qu[illegible]ionnaire and return both the employer and employee questionnaire in the stamped and self-addressed return envelope by the date specified in the cover letter.

A follow-up of non-respondents consisted of mailing a packet of materials two weeks after the initial mailing. The follow-up consisted of a packet of materials identical to the initial packet except that a cover letter on Ohio State University stationery replaced the cover letter on the Ohio Feed, Grain, and Fertilizer Association, Inc. stationery.

Data Analysis

The 45 questionnaires which were returned were checked for completeness and accuracy by the project staff. Information from the 30 usable responses was coded on Fortran coding sheets for key punching. In addition to coding appropriate respondent background information, each specific task statement was coded as to whether it was performed (1 = Task performed by respondent; blank = Task not performed by respondent) and the level of importance of the task (3 = Essential; 2 = Useful; 1 = Not Important). The information was keypunched on IBM cards and verified by personnel at the Instruction and Research Computer Center at The Ohio State University.

The data was analyzed using the SOUPAC computer program and the facilities of the Instruction and Research Computer Center. Consultant assistance for analyzing the data was provided by personnel at The Center for Vocational Education. The SOUPAC computer analysis resulted in the computation of relative frequencies, means, and rankings for each task statement. The results of the computer analyses were printed in tabular form for ease of interpretation.

FINDINGS

Objectives of the study resulted in the compilation of basic sample background information, the determination of tasks performed by the feed salesman, and the identification of tasks essential to successful performance as a feed salesman.

Description of the Sample

Information regarding the performance of tasks and the importance of the tasks to successful employment as a feed salesman was obtained from feed salesmen in various feed businesses across Ohio.

Response to the Survey

A total of 75 questionnaires were mailed and 45 replies were received. This represented a 60% rate of return. The response to the questionnaire is summarized in TABLE I.

TABLE I

EMPLOYEE RESPONSE TO THE QUESTIONNAIRE

	N	Percent of All Employees In The Survey
Employees in Survey	75	100.0
Total Returns	45	60.0
Usable Returns	30	40.0
Unusable Returns	15	20.0
Nonrespondents	30	40.0

Size of Business

Feed salesmen from various size retail feed businesses were included in the study. The number of full-time equivalent (two one-half time feed salesmen equal one full-time equivalent) feed salesmen employed in the firm was used as an index to assess the size of business where the feed salesman was employed. Of the 30 usable questionnaires received, 19 included information regarding the size of the business. TABLE II summarizes the responses to the question, "How many full-time equivalent feed salesmen are employed in your business?" Eleven feed salesmen or 57.9% were employed in firms employing one full-time equivalent

feed salesman. Three feed salesmen or 15.8% were employed in firms employing two full-time equivalent feed salesmen. Thus, 84.2% of the feed salesmen were working in businesses employing one to three full-time equivalent feed salesmen. The number of full-time equivalent feed salesmen employed in the businesses ranged from one to six. The average number of full-time equivalent feed salesmen employed in the businesses was 2.0.

TABLE II

SIZE OF FEED BUSINESS

Number of Feed Salesmen Employed in Business	N	Percent of Respondents
1	11	57.9
2	3	15.8
3	2	10.5
4	1	5.3
5 or more	2	10.5
Total	19	100.0

$\bar{X}$ number of feed salesmen in the business = 2.0

Total Work Experience

Feed salesmen with varying amounts of work experience in the feed industry were included in the study. TABLE III summarizes the responses to the question, "How many total years have you worked in the feed industry?" Nine feed salesmen or 30% had from one to five total years of work experience in the feed industry. Seven feed salesmen or 23.3% had from 16-20 total years of work experience in the feed industry. Six feed salesmen or 20% had from 21-30 years of work experience in the feed industry. The total years of work experience in the feed industry ranged from 1-35 years. Feed salesmen had an average of 16.8 years of total work experience in the feed industry.

Employment at Current Job

Feed salesmen in the survey had spent varying amounts of time in their present job. TABLE IV summarizes the responses to the question, "How many years have you worked at your present job?" Nine feed salesmen or 30% had worked at their present job from one to three years. Eight or 26.6% had worked at their present job from seven to ten years. Six feed salesmen or 20% had worked

at their present job 17 or more years. The years of work at their present job ranged from 1-35 years. Feed salesmen had been employed at their present job an average of 10.4 years.

TABLE III

TOTAL AMOUNT OF WORK EXPERIENCE IN THE FEED INDUSTRY

Years	N	Percent of Respondents
1-5	9	30.0
6-10	3	10.0
11-15	1	3.3
16-20	7	23.3
21-30	6	20.0
31 or more	4	13.4
Total	30	100.0

$\bar{X}$ years in the industry = 16.8

TABLE IV

LENGTH OF TIME AT PRESENT JOB

Years	N	Percent of Respondents
1-3	9	30.0
4-6	4	13.4
7-10	8	26.6
11-16	3	10.0
17 or more	6	20.0
Total	30	100.0

$\bar{X}$ years at present job = 10.4

Preparation as a Feed Salesman

Feed salesmen obtained training for their job from various sources. TABLE V summarizes their responses to the question, "Where did you receive your training as a feed salesman?" Twenty-seven feed salesmen or 90% indicated they received training on-the-job. Twenty feed salesmen or 66.7% indicated they attended a company school or course to receive training as a feed salesman. Eight feed salesmen or 26.6% indicated they had received training as a feed salesman by attending an adult education program. Six feed salesmen or 20% had received training in feed sales at a technical school program.

TABLE V

SOURCE OF TRAINING RECEIVED AS A FEED SALESMAN

Source	N	Percent of All Employees In The Survey
On-The-Job	27	90.0
High School Program	3	10.0
Technical School Program	6	20.0
College/University Program	3	10.0
Adult Education Program	8	26.6
Company School/Course	20	66.7

Duty Areas of Work Performed by the Feed Salesman

The 103 tasks were grouped under eight duty areas. Each respondent indicated whether he performed the specific task in his current position as a feed salesman. The percentages of respondents performing each task were averaged for all tasks under each duty area. The mean percentage of incumbents who performed specific tasks in specified duty areas is presented in TABLE VI.

Duty areas of work in which 50% or more of the incumbent workers performed the tasks were:

1. Performing General Office Work
2. Inventorying Products
3. Following Legal Rules and Regulations
4. Selling Feeds and Other Merchandise
5. Formulating Feeds for Livestock

Duty Areas of Work Essential for Successful Performance as a Feed Salesman

A level of importance rating was obtained for each task. The respondent could rate the task as essential, useful, or not important for successful performance as a feed salesman. A ranking of essential was assigned a numerical rating of "3", useful a numerical rating of "2", and not important a numerical rating of "1". The level of importance ratings for each task were averaged for all tasks under each duty area. The average level of importance ratings for the specific tasks in the specified duty areas are presented in TABLE VI.

Duty areas of work which received a 2.0 or higher level of importance rating by incumbent workers were:

1. Performing General Office Work
2. Recording Information
3. Inventorying Products
4. Following Legal Rules and Regulations
5. Selling Feeds and Other Merchandise
6. Planning the Feeding Operation on Farms
7. Maintaining Herd Health
8. Formulating Feeds for Livestock

Percentage Performance and Level of Importance Ratings of Specific Tasks

The percentage performance by incumbent workers and the level of importance for each specific task is also presented in TABLE VI.

It is recommended that the results for each specific task be examined by educators and others who are developing educational programs to determine curriculum content for preparing feed salesmen. Specific tasks with a high level of performance and a high level of importance rating should be given more emphasis in the educational program than specific tasks with a low level of performance and a low level of importance rating.

TABLE VI

PERCENTAGE PERFORMANCE AND AVERAGE RATING OF IMPORTANCE* OF SPECIFIC TASKS

TASK STATEMENTS	Percent Performing	Average Level of Importance
Performing General Office Work		
File various business forms and records	58	2.1
Meet with people	64	2.9
Schedule appointments	48	2.2
Use telephone	58	2.7
Write memos, notes, and letters	58	2.2
Arrange meetings with farmers	54	2.5
Mean Rating	56.7	2.4
Recording Information		
Record information on contractual arrangements	35	2.1
Record mixing and grinding instructions information	64	2.6
Assist farmers in improving and developing record keeping systems	32	2.0
Prepare analysis sheets for farmers	29	2.0
Mean Rating	40.0	2.2
Inventorying Products		
Assist in taking physical inventory	58	2.4
Determine inventory on hand from records	48	2.3
Make recommendations regarding amount of products to carry on inventory	51	2.4
Determine which products to carry	54	2.6
Mean Rating	52.8	2.4
Following Legal Rules and Regulations		
Interpret feed additive withdrawal laws and regulations	48	2.5
Interpret feed additive mixing regulations	61	2.7
Mean Rating	54.5	2.6

*Average rating of importance may range from 1-3 with 3 being the highest

TABLE VI (Cont.)

PERCENTAGE PERFORMANCE AND AVERAGE RATING OF IMPORTANCE OF SPECIFIC TASKS

TASK STATEMENTS	Percent Performing	Average Level of Importance
Selling Feeds and Other Merchandise		
Complete a sales slip	61	2.7
Describe products to customers	67	2.9
Determine when merchandise is to be delivered	64	2.5
Prepare and arrange sales displays in feed store area	61	2.4
Greet customers	64	2.7
Interpret customer's descriptions into manufacturer's product names	64	2.7
Make change	58	2.5
Price products for customers	64	2.8
Take customer's order over phone	67	2.6
Stock shelves in feed store	54	2.4
Interpret and use customer credit plans	54	2.5
Operate billing machine	35	2.1
Write advertising announcements	38	2.1
Determine if products requested are on hand	64	2.6
Handle customer complaints	70	2.7
Operate cash register	54	2.2
Sell substitute items	58	2.3
Sell related items	58	2.4
Calculate cash and quantity discounts	54	2.4
Identify seasonal items	54	2.5
Use sales catalogs	61	2.4
Evaluate customer needs	67	2.7
Make in-store sales contact	64	2.7
Make out-of-store sales contact	58	2.5
Participate in sales training sessions	58	2.2
Follow-up sales	61	2.6
Close a sale	67	2.8
Conduct sales presentation	51	2.3
Explain contractual merchandising pattern to customers	54	2.3
Plan daily sales contact schedule	35	2.1
Estimate potential market for products	45	2.2
Summarize daily sales records	45	2.3
Select appropriate advertising media to use	41	2.0
Sell feed over telephone	54	2.4
Determine trucking and feed preparation costs	54	2.3
Interpret recommendations for customers	67	2.6

TABLE VI (Cont.)

PERCENTAGE PERFORMANCE AND AVERAGE RATING OF IMPORTANCE OF SPECIFIC TASKS

TASK STATEMENTS	Percent Performing	Average Level of Importance
Describe comparative advantages of products	64	2.6
Mean Rating	57.1	2.5
Planning the Feeding Operation on Farms		
Prepare livestock feeding budgets	35	2.0
Assist in planning production goals	38	2.1
Plan alternative feeding programs for farmers	48	2.3
Mean Rating	40.3	2.1
Maintaining Herd Health		
Evaluate influence herd health has on production	45	2.3
Identify common livestock insects and pests	51	2.2
Identify sanitation problems	51	2.3
Identify symptoms of nutritional imbalance	45	2.1
Recommend procedures for correcting sanitation problems	51	2.4
Suggest materials to control insects and pests	61	2.4
Work with veterinarians on herd health problems	38	2.1
Mean Rating	48.9	2.3
Formulating Feeds for Livestock		
Calculate balanced rations for animals	67	2.8
Calculate costs of rations and feed mixtures	61	2.6
Calculate feed efficiency	41	2.4
Classify animals according to type of digestive systems	38	2.2
Classify feedstuffs	38	2.0
Determine amount of feed additives to add to rations	66	2.8
Determine amount of feed to be fed daily	66	2.8
Determine appropriate form in which feed should be fed animals	56	2.2
Determine maximum amount feedstuffs may be substituted for in rations	50	2.3
Determine moisture content of grains	50	2.3
Determine nutrient requirements for animals	63	2.2
Determine purpose of feedstuffs in rations	46	2.2

TABLE VI (Cont.)

PERCENTAGE PERFORMANCE AND AVERAGE RATING OF IMPORTANCE OF SPECIFIC TASKS

TASK STATEMENTS	Percent Performing	Average Level of Importance
Determine purpose of nutrients in rations	46	2.2
Determine relative nutritive value of feedstuffs	36	2.1
Determine storability of grains and roughages	39	2.0
Determine test weight of grains	53	2.1
Determine total amount of feed needed	59	2.4
Determine water requirements for animals	53	2.2
Determine when additives should be withdrawn from animals	59	2.7
Recommend when rations and mixtures should be changed	56	2.6
Determine which additives may be fed animals	56	2.7
Determine which feedstuffs may be substituted in rations	43	2.3
Develop plans for using damaged grain and forages	43	2.1
Draw samples for feed analysis	53	2.4
Evaluate influence feed quality has on consumption, efficiency, and production	50	2.3
Evaluate influence ration imbalance has on production and efficiency	46	2.3
Evaluate influence residues in meat may have on marketing problems	36	2.1
Identify factors that influence feed efficiency	53	2.2
Identify factors that influence quality of grains and roughages	43	2.2
Determine purpose of various additives in rations	53	2.4
Identify livestock problems due to improper feeding	56	2.2
Identify product and brand names	59	2.5
Identify purposes of parts in digestive system	29	1.6
Incorporate medications into feed mixtures according to veterinarian's recommendations	29	2.2
Interpret feed analysis reports	50	2.3
Interpret feed tags and labels	63	2.5
Interpret feeding charts and tables	59	2.4
Recommend appropriate feeding methods	50	2.3
Recommend ways to improve feed palatability	46	2.4
Work with veterinarian in developing feeding programs	29	2.0
Mean Rating	50.7	2.3